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Statement of Steven P. Kraft

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On Behalf of the Nuclear Energy Institute

DOE Hearing on Yucca Mountain Draft Environmental Impact Statement

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Good afternoon. My name is Steven Kraft, I am director of Spent Nuclear Fuel Management at the Nuclear Energy Institute—the Washington-based policy organization the nuclear energy industry.

Our comments about the Yucca Mountain Draft Environmental Impact Statement today will focus on three areas:

- 1... • First, the societal benefits of building a repository, which are clearly shown in the draft EIS.
- 2... • Second, the fact that the environmental and health impacts related to a repository will be smaller than DOE assumes, given the extremely conservative assumptions that the draft EIS uses to assess the impact of potential transportation accidents.
- 3... • And third, a vital aspect that the draft EIS fails to consider is the possible loss of the nuclear energy's electricity supply and environmental benefits if a permanent repository is not built.

Before addressing these three areas, there are several reasons why building a permanent repository at Yucca Mountain is the right thing to do. Among them:

- The world's pre-eminent scientists have long agreed that deep geologic disposal is the best way to safely manage used nuclear fuel. They believe that the combination of natural features, such as Yucca Mountain's remote location, limited rainfall, geology consisting of welded volcanic tuff, and its elevation about 1,000 feet above groundwater, make it a most promising site in the nation for a permanent repository.
- DOE, in its 1998 Viability Assessment, concluded that the site can protect public health and safety. Energy Secretary Bill Richardson wrote to President Clinton in December that this unparalleled

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scientific investigation has revealed “no showstoppers.” The draft EIS further builds on this record of scientific evidence.

- Our generation has benefited from nuclear technology—be it national security, life-enhancing scientific research or reliable, emission-free electricity. With that in mind, it is our generation’s duty to safely and responsibly manage the byproducts of these uses of nuclear technology.
- The federal government must meet its obligation to the American people to begin moving used nuclear fuel to a central disposal facility. Electricity ratepayers have committed over \$16 billion for this purpose, and by the DOE’s own estimates, action by the federal government will be about 12 years past the 1998 target date for fuel acceptance.

The draft EIS concludes that opening a repository at Yucca Mountain would be far safer and more cost-effective than leaving used fuel and high-level waste at 72 nuclear power facilities and five DOE sites across the country. The DEIS speculates small repository impacts in terms of latent cancer risk, based on very conservative assumptions, that represent no more than 1/10 millionth of one percent of the normal cancer risk that all Americans normally face from all other sources. Stripping away the conservatism, there is a strong likely-hood that the health and safety impact of the repository will be zero. Even with considerable conservatism, any impact that is postulated to occur will be approximately zero.

In terms of cost, DOE estimated that expenditures for either scenario under the no-action alternative for the first 100 years would range from \$51.5 billion to \$56.7 billion. The estimated cost for the remaining 9,900 years under on-site storage scenario with institutional controls would range from \$480 million to \$529 million per year—or approximately \$5 trillion dollars (in 1998 dollars) over a 10,000-year period.

By comparison, managing used nuclear fuel at a deep geologic repository would cost about \$44 billion, \$6 billion of which already has been spent. This estimate includes construction, used fuel transport to the facility, operation, monitoring, and eventual closure.

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While the draft EIS provides an even-handed comparison of building a repository versus taking no action, the same cannot be said about DOE’s assessment of transportation-related impacts.

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In an attempt to consider every *possible* accident scenario, DOE has given credence to the virtually *impossible*. For example, the “maximum reasonably foreseeable accident” scenario modeled in the draft EIS has an incredibly small likelihood of occurring: about 1.4 in 10 million years. Considering that used fuel will be transported for only about 24 years, the chances that such a “worst-case accident” might occur essential is zero. The chances of such a fatal accident are far less than those of loss of life due to meteor impact which has a probability of occurrence of 1 in 100,000 years*. In order to find such an improbable accident to analyze, DOE had to go farther into the realm of the incredible than they would be required to do by any regulator.

The fact is that during the past 35 years, the commercial nuclear industry has an impeccable safety record of 3,000 shipments of used fuel across U.S. highways and railroads. No injuries, fatalities or environmental damage has occurred because of radioactivity of the fuel.

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The failure to open a permanent repository over the long term – could diminish the availability of nuclear power in this country. Some state legislators and regulators already are imposing restrictions on additional storage for used fuel at nuclear plant sites because of the federal government’s inaction. Should America’s nuclear generating capacity be reduced because of the lack of a national repository, the environmental impact of cutting back on our largest source of emission-free electricity would be severe. The draft EIS discusses the various impacts related to on-site storage under the no-action scenarios, but fails to acknowledge the far-greater environmental impact on our air quality if fossil sources must be used to replace the 20 percent of electricity produced by nuclear power plants.

By substituting for fossil fuels, nuclear energy each year avoids the emission of 155 million metric tons of carbon, 5 million tons of sulfur dioxide and 2.4 million tons of nitrogen oxides. Without the clean-air benefits of nuclear energy, our nation would find it nearly impossible to meet increasingly stringent Clean Air Act restrictions. Moreover, the United States would have to double the reductions in carbon to meet the commitments by the Clinton Administration under the 1998 Kyoto Protocol.

* United States Atomic Energy Commission, Reactor Safety Study, WASH-1400, August 1974

In conclusion:

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- ...1 • [The industry supports the finding of the draft environmental impact statement that building a repository at Yucca Mountain is the safest and most cost-effective way to manage used nuclear fuel.]
- ...2 • [The draft EIS makes this conclusion even with an unrealistic view of the risks related to transporting used nuclear fuel. The fact is, in more than 35 years, not one radiation-related injury or fatality has occurred in the United States as a result of transporting used nuclear fuel. The draft EIS should take into account this enviable safety record, rather than using an ultra-conservative accident scenario—one that is likely to occur 1.4 times in 10 million years.]
- ...1 • [Building a repository is the environmentally responsible thing to do. A repository will safely isolate used nuclear fuel for thousands of years and ensure that Americans continue to enjoy the benefits of reliable, economic and emission-free nuclear energy.]
- The draft EIS makes it clear that the Energy Department must move forward now with the Yucca Mountain Project—backed by world-class science and engineering—to meet its obligation to the American people by building a repository

On behalf of the Nuclear Energy Institute, and our more than 275 member organizations around the world, I thank you for this opportunity to comment of the Department of Energy's draft environmental impact statement for Yucca Mountain.

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